



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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August 2, 2002

CERTIFIED RETURN RECEIPT  
7099 3400 0016 8895 5118

Mark Dotson, Manager  
Western Utah Copper Company  
1208 South 200 West  
Milford, Utah 84751

Re: Initial Review of Notice of Intention to Commence Large Mining Operations, Western Utah  
Copper Company, Maria Mine, M/001/059, Beaver County, Utah

Dear Mr. Dotson:

The Division has completed a review of your draft Notice of Intention to Commence Large Mining Operations for the Maria Mine, located in Beaver County, Utah, which was received June 6, 2002. After reviewing the information, the Division has the following comments that will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. Please provide a response to this review by September 2, 2002.

The Division will suspend further review of the Maria mine NOI until your response to this letter is received. If you have any questions regarding this technical review please contact me, Tom Munson, Paul Baker or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your patience and cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg  
Permit Supervisor  
Minerals Regulatory Program

jb

Attachment: Review & blank surety estimate

cc: Ed Ginouves, BLM, Cedar City FO w/attachment

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**INITIAL TECHNICAL REVIEW  
NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS**

**Western Utah Copper Company  
Maria Mine**

**M/001/059**

**R647-4-104 - Operator's, Surface and Mineral Ownership**

1. Please provide, "The name, permanent mailing address, and telephone number of the operator responsible for the mining operations and reclamation of the site."
2. Please provide, "The name, permanent mailing address, and telephone number of the surface landowner(s) and mineral owners(s) of all land to be affected by the operations."
3. Please provide, "The federal mining claim number(s), lease number(s), or permit number(s) of any mining claims, or federal or state leases or permits included in the lands affected."  
(TM)

**R647-4-105 - Maps, Drawings & Photographs**

**105.1 Topographic base map, boundaries, pre-act disturbance**

The plan states that the entire disturbance at this site will not exceed 7 acres. The reclamation plan indicates 10.62 acres of disturbance that does not include disturbances attributed to the development of a water well that will service the site, the disturbance for the water line placement, and the road to the well. Please correct this discrepancy. (DJ)

The introduction to the plan states that a bond for disturbances associated with the exploration, equal to three acres of disturbance, is presently in place. What is the surety amount and who is presently holding this bond? (DJ)

The Division agrees that the TCLP tests run on the old mill tailings indicate that the tailings tested do not show a problem with migration of metals contained within that sample. However, we are concerned that this sample starts at a pH of 4.94 with a final pH of 4.81. The plan states that the material scheduled to be milled will contain sufficient calcium chloride to keep the tailings pH elevated. Please explain the low pH value shown on the test data sheet. (DJ)

**105.1.14**

Please identify, "Known areas which have been previously impacted by mining or exploration activities within the proposed area."

**105.2 Surface facilities map**

The plan presently does not include any storage facilities for the fuels required for operating the site. Please indicate the location and type of fuel storage facility proposed and include plans for secondary containment and clean up of spills. (DJ)

The location of the generators is not shown on the site map. Please show where these facilities will be placed. Please indicate whether these generators will be placed on cement, in a building, or trailer mounted. (DJ)

Will this site contain a service and repair facility for the mobile machinery that will be operated on the site? If so, where will this facility be located? (DJ)

Will the tailings storage area be sloped to allow for fluid recovery from the tailings? (DJ)

The location and material used to construct the sub-station should be shown on the facilities map. The plan states that the location of the substation cannot be shown until talks with a commercial power company are completed. However, the plan also states that generator power will be wired into a central substation. Commercial power would likely be routed to this same substation. Therefore, this facility should be shown on the surface facility map and the removal included in the bond calculations. (DJ)

The plan states that the well site (or sites) will contain a pump, fuel tank and a generator. Please include a plan view indicating the size of the area to be impacted by this facility. Reclamation costs for these areas, as well as for the roads built to access these areas, should be included in the bond. (DJ)

The placement of the septic tank and leach field should be shown on the surface facilities map. (DJ)

The plan states that an office building will be built on the site after the mill building is constructed. Please indicate the size and construction details for this building. The demolition and removal of this building should be included in the bond calculations. (DJ)

Maps 3, 4 & 5 show the existence of a fresh water pond and additional storage area, but these items are not discussed in the plan. Please include the design, construction and reclamation plans for these two facilities. (DJ)

Map 3 indicates the construction site is 300'x 500' (150,000 sq ft). The actual site, as shown on the map, is larger. Please indicate the correct figure. (DJ)

The reclamation plan notes 8,000 sq ft of access road that will need to be reclaimed. Please show this road on the surface facilities and reclamation treatments maps. (DJ)

#### **R647-4-106 - Operation Plan**

##### **106.2 Type of operations conducted, mining method, processing etc.**

The plan states that the mill will eventually be capable of processing 2,500 tons/day with minor modification. Will these modifications to the mill change the facilities as presently proposed? (DJ)

**106.3 Nature of materials mined, waste and estimated tonnages**

The plan states that material from other sites may be milled at this site at a later date. What are the metallurgic properties of these alternate materials and will they be similar to the ore material presently proposed to be processed at this mill? (DJ)

**106.5 Existing soil types, location, amount**

The application contains no baseline information about soils. The Division needs a description of existing soil types, including the location and extent of topsoil or suitable plant growth material. While it is understood that much of the site is previously disturbed, much of it is not, and the application needs information on which to base the reclamation plan. (PBB)

The application says in Section 2.2, "The entire area that WUCC proposes to work in has suffered tremendous disturbance from past operators and very little if any virgin ground can be discovered at or near the proposed site." This statement needs to be modified. Most of the area around the proposed mill building is undisturbed. (PBB)

**106.6 Plan for protecting & redepositing soils**

The application contains no information about how much soil is available or about the quality of the soil material in the area. There is limited information about storing and depositing soils. A response letter to the Bureau of Land Management (BLM) behind the tab "Amendments to Plan of Operations" says soil will be stockpiled south of the Hidden Treasure waste dump piles. "Sheet four" in the maps section shows locations of three proposed topsoil stockpile areas, and by using the information in the letter to the BLM, one can deduce which location is to be used. The map should be revised to clearly show only the area that will be used. (PBB)

The application does not show what or how much topsoil will be salvaged and stored in this stockpile area. The plan must describe/show how much soil will be taken from which areas. The operator also needs to consider whether the topsoil storage area has enough room for the soil to be stored there. (PBB)

In the letter to the BLM, the operator commits to mix vegetation with the topsoil then seed the piles (are there more than one?) to stop noxious weed advancement. Because establishing vegetation can be difficult in an arid environment, the Division recommends that the operator monitor the vegetation, and it may be necessary to perform remedial measures if erosion or noxious weeds become problems. (PBB)

Section 2.3.5 discusses reclamation of the tailings. According to this section, overburden and topsoil from the existing spoil piles of the original Hidden Treasure stripping operation would be used to cover the tailings six inches deep; however, the reclamation plan section of the application says the tailings impoundment will be covered with 12 to 18 inches of growth medium. This discrepancy needs to be resolved. The Division does not consider six inches to be adequate soil cover. It appears there is ample soil available in the area for a deeper coverage. (PBB)

Since the Division has no information about the nature of the material that would be used to cover the tailings, it is impossible to judge whether the material is suitable as a growth medium. It should be tested for: pH, acid/base potential, texture (including coarse fragments), water holding capacity, sodium adsorption ratio (SAR), exchangeable sodium percentage, electrical conductivity, and organic matter content. (PBB)

The analyses of the tailings show no limiting factors except the pH, but there are other parameters for which the tailings should be tested, such as SAR, electrical conductivity, and texture. While the pH is not extremely low, it is much lower than plants in the area are adapted to and would probably limit plant growth if only six inches of soil was placed over it. Eighteen inches of soil cover may be adequate. (PBB)

The tailings sample used is old material and may not be representative of the tailings that will be produced in the proposed operation. Chemistry of these types of materials is known to change with time. For this reason, it is important that the operator include a commitment to periodically test the actual tailings produced as part of the future mining. If the operator does any kind of pilot-test on the processing equipment, the tailings from this test should be analyzed to obtain results as far as possible in advance of actually beginning operations. It may be necessary to modify the reclamation plan based on these results. (PBB)

The reclamation plan says three feet of growth medium will be used to cover the shaft and that 12 to 18 inches of growth medium will be placed over the pad area and the fresh water pond, but it needs to indicate from where this material will be obtained and what its quality is. The Division is concerned whether this much soil would be available in the proposed disturbed area because soils in the area may have sodic or calcic horizons that could limit plant growth if mixed with upper soil horizons. (PBB)

The reclamation plan indicates that the access road will be ripped and seeded. If the road is only ripped, there are likely to be erosion problems as water follows the rips. It would be better to gouge the road irregularly and about two feet deep with a trackhoe or similar piece of equipment. (PBB)

#### **106.7 Existing vegetation - species and amount**

The application contains no information about vegetation currently existing on the site or in adjacent areas. The rules require the application to contain a description of existing vegetative communities and cover levels sufficient to establish revegetation success standards. (PBB)

### **R647-4-107 - Operation Practices**

#### **107.1 Public safety & welfare**

A copy of the Air Quality should be included with the application or a letter stating that a permit will not be required. (DJ)

**Posting warning signs**

Signs should be placed on the road to the facility warning the public of the existence of the facility and any associated hazards. (DJ)

**107.4 Deleterious material safely stored or removed**

The plan states that oil will be handled in accordance with the MSHA regulations, which are less stringent. Please include a copy of these regulations for the Division's review and approval. (DJ)

**107.5 Suitable soils removed & stored**

This is addressed under regulation 106.6 above. (PBB)

**107.6 Concurrent reclamation**

The application does not describe how reclamation will be conducted concurrently with the mining operations. Since this is an underground operation with various surface facilities, concurrent reclamation may be difficult or impossible, but the applicant needs to at least address the issue and identify any areas where concurrent reclamation might be feasible. (PBB)

**R647-4-109 - Impact Assessment**

**109.2 Impacts to threatened & endangered wildlife/habitat**

The application does not address whether there would be any effects on threatened or endangered species. The Division is aware of three listed threatened or endangered species that may occur in Beaver County. These are the California condor, bald eagle, and the Utah prairie dog. Of these, the only one that might be adversely affected is the prairie dog. Information in a publication from the U. S. Fish and Wildlife Service and other agencies and groups shows historical range of the Utah prairie dog in the southern part of Beaver County and not in the mine area. The BLM is working on an environmental assessment that should address the possibility of threatened and endangered species in the area. Information from this assessment about the Utah prairie dog needs to be included in the application. Any other pertinent information about threatened or endangered species should also be included. (PBB)

**109.3 Impacts on existing soils resources**

At this time, the potential impacts to soil-resources are not known because the application does not include baseline information about soils. After the operator includes this information and addresses comments about soil salvage and replacement, the operator and Division will be able to determine what effects the operation will have on soils. (PBB)

**R647-4-110 - Reclamation Plan**

**110.1 Current & post mining land use**

The application needs to discuss the current and postmining land uses. (PBB)

**110.3 Description of facilities to be left (post mining use)**

The application indicates the access road will be reclaimed, but a letter from the operator behind the tab "Amendments to Plan of Operations" indicates some of the roads are public roads. The operator needs to specify what roads are public and what roads will be reclaimed. (PBB)

**110.4 Description or treatment/disposition of deleterious or acid forming material**

Reclamation of the tailings pond is discussed in Section 106.6 of this review. (PBB)

**110.5 Revegetation planting program**

In the reclamation plan section of the application, the operator commits to seed various areas, but there are no plans showing how this will be done. The application needs to specify the seed mix and the quantities of seed in terms of pure live seed per acre. Once the operator supplies baseline vegetation information, the Division could recommend a seed mix. The reclamation plan should also show surface preparation methods, seeding methods and any special treatments, such as mulching, irrigation, or fertilizer or organic matter additions. (PBB)

**R647-4-111 - Reclamation Practices**

**111.5 Land capable of post mining land use**

It is not known whether the land would be capable of supporting the postmining land use, because the plan does not give enough detail of the reclamation plan and because the operator has not specified the postmining land use. (PBB)

**R647-4-112 – Variance**

The application needs to state whether the applicant requests any variances. (PBB)

**R647-4-113 – Surety**

A blank copy of the Division's surety estimate is attached for your use.

**Additional items that will also need to be included in the Maria Mine surety amount and also placed in the text of the plan:**

Thickness and amount of reinforcement in building floors at the site.

Number, size and amount of reinforcement in concrete footings that will be higher than 3 feet.

Cost to reclaim the office building

Cost to reclaim water well pad, road to the well(s) and cost to plug well(s) at closure.

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Initial Review  
M/001/059  
August 2, 2002

Reseeding cost for water line, should the initial seeding fail.

Cost of designing and installing the bulkhead in the Maria Shaft.

Cost to reclaim maintenance and generator facilities, if these items will be constructed.

Reclamation of the sub-station.

If commercial power is brought to the site, the cost of removal of the power line.

Any other changes in the plan that result from this review.

Attachment: Blank Surety Estimate



# RECLAMATION SURETY ESTIMATE

mine operator

last revision

021/02

mine name

filename M000-000.WB2

page "estimate D8"

DOGM file Number

County

Prepared by Utah State Division of Oil, Gas & Mining

Note: actual unit costs may vary according to site conditions last unit cost update 2-Aug-00

-Amount of disturbed area which will receive reclamation treatments = acres

-Estimated total disturbed area for this mine = acres

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc. (mtls & installation)	0	sum	200	0	(1)
Demolitions of buildings and facilities	0	cf	0.24	0	(2)
Debris & equipment removal - trucking	0	trips	50	0	(3)
Debris & equipment removal - dump fees	0	ton	55	0	(4)
Debris & equipment removal - loading trucks w/FE loader	0	hours	166	0	(5)
Demolition & debris removal - general labor	0	hours	15	0	(6)
Regrading facilities areas (1 ft depth)	0	acre	502	0	(7)
Regrading waste dump slopes	0	CY	0.5	0	(8)
Ripping waste dump tops	0	acre	234	0	(9)
Ripping stockpile & compacted areas	0	acre	234	0	(9)
Ripping pit floors	0	acre	234	0	(9)
Ripping pit access roads	0	acre	502	0	(9)
Creating safety berms or barriers around highwalls	0	LF	0.16	0	(10)
Ripping access roads - dozer	0	acre	234	0	(9)
Regrading access roads - dozer	0	acre	234	0	(9)
Sidecast mtl replacement on steep roads - trackhoe	0	LF	1.09	0	(11)
Surface drainage restoration or construction	0	LF	0.16	0	(10)
Topsoil replacement - dozer	0	CY	0.5	0	(12)
Topsoil replacement - scraper	0	CY	1.15	0	(13)
Topsoil replacement - truck & FE loader	0	CY	2.6	0	(14)
Mulching (2 ton/acre alfalfa/straw)	0	acre	160	0	(00)
Fertilizing (100 lb/acre diammonium phosphate)	0	acre	90	0	(00)
Composted manure (10 ton/acre)	0	acre	300	0	(00)
Broadcast seeding	0	acre	225	0	(00)
Drill seeding	0	acre	205	0	(00)
Hydroseeding	0	acre	800	0	(00)
General site cleanup & trash removal	0	acre	50	0	(00)
Equipment mobilization	0	equip	1000	0	(00)
Reclamation supervision	0	days	386	0	(15)
Subtotal				0	
10% Contingency				0	
Subtotal				0	
Escalate for 5 years at 2.82% per year				0	
Total				0	
Rounded surety amount in year 2007 \$				0	
Average cost per disturber acre = #DIV/0!					

# RECLAMATION SURETY ESTIMATE

Mine Operator

last revision

08/02/00

mine name

filename M000-000.WB2

page "estimate D9"

DOGM file number

County

Prepared by Utah State Division of Oil, Gas & Mining

-This estimate uses a D9 size dozer for most earthwork

Print block named "d9est" for the estimate page & "d9notes" for the notes page

Note: actual unit costs may vary according to site conditions

last unit cost update

2-Aug-00

-Amount of disturbed area which will receive reclamation treatments =

0 acres

-Estimated total disturbed area for this mine =

0 acres

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc. (mtls & installation)	0	sum	200	0	(1)
Demolition of buildings & facilities	0	CF	0.24	0	(2)
Debris & equipment removal - trucking	0	trips	50	0	(3)
Debris & equipment removal - dump fees	0	ton	55	0	(4)
Debris & equipment removal - loading trucks w/FE loader	0	hours	166	0	(5)
Demolition & debris removal - general labor	0	hours	15	0	(6)
Regrading facilities areas (1 ft depth)	0	acre	364	0	(7)
Regrading waste dump slopes	0	CY	0.5	0	(8)
Ripping waste dump tops	0	acre	271	0	(9)
Ripping stockpile & compacted areas	0	acre	271	0	(9)
Ripping pit floors	0	acre	271	0	(9)
Ripping pit access roads	0	acre	271	0	(9)
Creating safety berms or barriers around highwalls	0	LF	0.16	0	(10)
Ripping access roads - dozer	0	acre	271	0	(9)
Regrading access roads - dozer	0	acre	502	0	(7)
Sidecast mtl replacement on steep roads- trackhoe	0	LF	1.09	0	(11)
Surface drainage restoration or construction	0	LF	0.16	0	(10)
Topsoil replacement - dozer	0	CY	0.5	0	(12)
Topsoil replacement - scraper	0	CY	1.15	0	(13)
Topsoil replacement - truck & FE loader	0	CY	2.6	0	(14)
Mulching (2 ton/acre alfalfa)	0	acre	160	0	(00)
Fertilizing ( 100 lb/acre diammonium phosphate)	0	acre	90	0	(00)
Composted manure (10 ton/acre)	0	acre	300	0	(00)
Broadcast seeding	0	acre	225	0	(00)
Drill seeding	0	acre	205	0	(00)
Hydroseeding	0	acre	800	0	(00)
General site cleanup & trash removal	0	acre	50	0	(00)
Equipment mobilization	0	equip	1000	0	(00)
Reclamation Supervision	0	days	386	0	(15)
		Subtotal		0	
10% Contingency				0	
		Subtotal		0	
Escalate for 5 years at 2.82% per yr				0	
		Total		0	
Rounded surety amount in yr 2007-\$				0	
Average cost per disturbed acre =				#DIV/0!	